Supreme Court, U.S.
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No. 03-6821

IN THE

Supreme Court of the United States

DAVID NELSON,

Petitioner,

—v.—

DONAL CAMPBELL, Commissioner,
Alabama Department of Corrections, *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

BRIEF OF LAURIE DILL, M.D., FRANK GOGAN, M.D., GARY KALKUT, M.D., MARK C.D. MARSHALL, M.D., JANE MOBLEY, M.D., & WILLIAM WINTERNETZ, M.D. AS *AMICI CURIAE* IN SUPPORT OF PETITIONER

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INTEREST OF THE AMICI CURIAE[1]

Each of the *amici curiae* is a medical doctor.[2] Our practices require us to be familiar with current practices in obtaining intravenous access, including the surgical procedures necessary to gain access to central veins.

The underlying dispute in this matter concerns the State of Alabama's intent to utilize a medical procedure known as a "cut-down" in a non-surgical setting in order to gain access to a functional vein, and thus enable the Petitioner's execution by lethal injection. We understand that the Court is concerned principally with how a challenge to such a procedure may be brought, and we offer no view on that question. We do, however, write briefly to set forth current medical standards for gaining intravenous access in individuals who have compromised veins.

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[1] This brief was not written in whole or in part by counsel for any party, and no person or entity other than the *amici curiae* and their counsel has made any monetary contribution to the brief's preparation or submission. The parties have consented to the filing of this brief in letters on file with the Clerk.

[2] Laurie Dill, M.D., practices internal medicine in Montgomery, Alabama, and has been a physician for 17 years. Frank Gogan, M.D., has practiced general medicine in Montogmery, Alabama, and has been a physician for 23 years. Gary Kalkut, M.D., has practiced internal medicine in New York City for 20 years, and has several years of experience in providing medical services to prisoners. Mark C.D. Mitchell practices emergency medicine in Daphne, Alabama, and has been a physician for 21 years. Jane Mobley practices internal medicine in Birmingham, Alabama, and has been a physician for 17 years. William Winternetz practices internal medicine in Tuscaloosa, Alabama, and has been a physician for 26 years.

STATEMENT

This matter arises from an order of the Alabama Supreme Court that the Petitioner, David Nelson, be executed by lethal injection. In the weeks leading up to Nelson's October 9, 2003 execution date, the parties became aware that Nelson's poor vein structure made peripheral venous access in his hands and arms impracticable. Thereafter, the Warden of Holman Prison informed Nelson and his counsel that in order to gain adequate access, the State would attempt a cut-down procedure to locate an adequate vein in Nelson's upper thigh or arm.

Shortly before the scheduled execution, Nelson filed the instant suit, asserting that the State's employment of a cut-down procedure, in a prison setting, and under the circumstances outlined by the Warden, was both reckless because of the irresponsible manner in which the State was proposing to conduct the procedure, and unnecessary because of less painful, less traumatic and safer alternatives.

Nelson supported his claims with the affidavit of a Board Certified anesthesiologist, Mark Heath, M.D. Dr. Heath asserted the cut down is a potentially risky surgical procedure. He described the procedure as painful and disturbing, specifically the smoke, odor, as well as the buzzing and sizzling noises that can result from cautery. JA 32. Dr. Heath indicated that cut-down procedures are usually performed under deep sedation, with the administration of potent intravenous analgesics (drugs that block pain), because otherwise they would be extraordinarily disturbing and distressing. *Id.* Finally, he asserted that a cut-down procedure is a procedure that should be performed only by a physician or practitioner who is specifically trained and credentialed to perform that procedure. JA 32-33. Moreover, given the near uni-

versal adoption of superior techniques, Dr. Heath explained there is no comprehensible reason for the State of Alabama to employ the cut-down procedure to obtain intravenous access. JA 37.

The State countered with affidavits from the Warden and a medical doctor, Marc Sonnier. J.A. 90-94. The Warden explained that the State was now prepared to use the cut-down procedure in the event that access to veins in the thigh and neck proved unavailable, and that an unidentified medical doctor would perform any of the needed procedures. J.A. 93-94. He further stated that if the cut-down procedure was utilized, Nelson would be given local anesthesia. J.A. 94. Dr. Sonnier explained that he was familiar with each procedure outlined by the Warden and that none of the procedures, if performed in the prison setting, would pose any significant risk to Nelson. J.A. 90-91.

The parties disagree profoundly upon the nature of the cut-down procedure and adequacy of the state's plan to employ it. We offer this brief to advise the Court on these areas of dispute.

ARGUMENT

From our experience and training, the disputed issues do not present close questions. The Petitioner has fully and fairly described how current medical practice views the appropriate use of cut-down procedures, and why the State's hastily assembled plan to utilize it is sharply inconsistent with such practice.

1. The Cut-Down Procedure is an Invasive Surgical Procedure That Requires Appropriate Safeguards

The cut-down procedure is an accepted medical procedure when conducted in the correct setting, by a properly trained physician, and where less intrusive procedures are unavailing. "Venous cutdown is contraindicated when less invasive alternatives exist or when excessive delay would be required for the procedure to be performed." Steven C. Dronen and Patricia Lanter, *Venous Cutdown*, *in* ROBERTS: CLINICAL PROCEDURES IN EMERGENCY MEDICINE, (James R. Roberts & Jerris R. Hedges eds., 3d. ed. 1998).

"Performance of a rapid, effective cutdown can be achieved only by thorough knowledge of the procedure and attention to its many details." *Id.* There are a host of reasons why cut-down must be performed in the correct setting, and by an adequately trained physician. The ultimate objective of the procedure is to go deeply into an arm, leg, or chest to locate large, uncompromised veins. "Detailed knowledge of anatomy is imperative to the success of this procedure." *Id.* Moreover, "[t]he choice of a particular vein should be governed by its accessibility and size and by the physician's experience and training." *Id.* Skill and practice are especially important in cut-down procedures, because they require cutting through tissue, fat, and muscle; such deep invasion breaches small arteries and causes bleeding.

Given the nature of the procedure, there are numerous possible complications that the physician must take precautions to avoid. *See id.* Whenever deep incisions are made, there is a clear risk of rupturing large blood vessels. Such a breach can cause a severe hemorrhage. When the procedure is used in the neck area, two additional risks arise: cardiac dysrhythmia, an abnormality of

the electrical activity of the heart, and pneumothorax, which induces the sensation of suffocation. *See Venous Cut Down: A Quicker and Safer Technique* (visited Jan. 20, 2004), The Royal College of Surgeons, Surgical Knowledge and Skills Website <http://www.edu.rcsed.ac.uk/operations/op4.htm>. Cutdown also causes significant physical pain and obvious psychological and emotional stress. "An indirect but significant complication is deterioration of an unstable patient during a time-consuming cutdown attempt." Steven C. Dronen and Patricia Lanter, *supra.*

Because of these and other risks,[3] it is necessary that this procedure take place in a hospital or otherwise appropriate medical setting. All of the complications that can arise require ready access to equipment found only in the hospital setting, and to trained staff who can competently assist the physician.[4] In the absence of sufficient, qualified, available staff and other doctors, a physician would lack the assistance necessary to deal adequately with complications as they arose.

It is also accepted practice that cut-down procedures should be performed by physicians who have specialized

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[3] The complications of venous cut-down include local hematoma and infection, sepsis, phlebitis, embolization, wound dehiscence, and injury to associated structures. Steven C. Dronen and Patricia Lanter, *Venous Cutdown*, *in* ROBERTS: CLINICAL PROCEDURES IN EMERGENCY MEDICINE, (James R. Roberts & Jerris R. Hedges eds., 3d. ed. 1998).

[4] For instance, acceptable protocol requires that "[i]f a physician is unable to insert a catheter after three attempts, he or she should seek help rather than continue to attempt the procedure. The incidence of mechanical complications after three or more insertion attempts is six times the rate after one attempt." David C. McGee, M.D., and Michael K. Gould, M.D., *Preventing Complications of Central Venous Catherization*, 348 N. ENGL. J. MED. 1123, 1128 (2003).

training in the area.[5] "As with most medical procedures, the level of experience of the physician reduces the risk of complications." McGee and Gould, at 1128. This is not a procedure that all physicians would feel comfortable performing, and the risk of complication or error is significantly lessened when skilled, trained physicians perform the procedure.[6] "[Even] insertion of a catheter by a physician who has performed 50 or more catherizations is half as likely to result in a mechanical complication as insertion by a physician who has performed fewer than 50 catherizations." McGee and Gould, at 1128.

Moreover, to lessen the pain, trauma and anxiety of the patient, it is also accepted practice that a general anesthesia or deep sedation be utilized. Many, if not most patients are profoundly traumatized by the sight of copious amounts of their own blood, and by the pungent odors that arise from such procedures as cautery.

We believe that any competent physician, if asked to support the State's plan to resort to the cut-down under the instant conditions—without the guarantee of adequate equipment, a certified and trained practitioner to perform

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[5] Emergency medicine, surgery, anesthesiology and cardiology are the four areas of medicine most likely to provide doctors with experience in cut-down procedure. Doctors outside of these specialties may well have never performed a cut-down.

[6] Case law includes numerous examples of how inexperience and lack of skill in cut-down procedure can lead to devastating pain and suffering in patients. *See, e.g., Crawford County State Bank v. Grady*, 514 N.E. 2d 532 (Ill. App 4 Dist. 1997) (multiple cut downs on leg cause swelling and eventual gangrene in foot; foot is later amputated); *Edwards v. Our Lady of Lourdes Hosp.*, 526 A. 2d 242 (N.J. Super. A.D. 1987) (after cut down, inexperienced physician inserts catheter in artery, not vein; right leg is later amputated at the hip after gangrene develops); *Barrette v. Hight*, 230 N.E. 2d 808 (Mass. 1967) (during cut down by inexperienced doctor, lateral nerve in arm is severed and median nerve is damaged).

the procedure, licensed medical support staff, and a surgical environment, and without having first ruled out the safer, far less painful preferred procedures—would refuse. For all of the foregoing reasons, a cut-down procedure should not be utilized in a prison environment unless it is fully equipped to provide safe surgery.

2. Less Intrusive and Safer Procedures Are Available

Modern medicine provides the State of Alabama with plainly superior options. Indeed, we believe most trained physicians, in the absence of normal peripheral venous access, would only resort to a cut-down after definitively ruling out the other, safer, less invasive procedures.

These preferred procedures are well established. "[A] method of rapid fluid infusion that is technically easier and faster than venesection is the percutaneous insertion of large-bore introducer devices into the subclavian, internal jugular, or femoral veins." Steven C. Dronen and Patricia Lanter, *Venous Cutdown, in* ROBERTS: CLINICAL PROCEDURES IN EMERGENCY MEDICINE, (James R. Roberts & Jerris R. Hedges eds., 3d. ed. 1998). "Venous cutdown is only indicated where more rapid and less invasive venous access is not obtained. Options include cannulation of the femoral vein or neck veins . . . ." Tracey Tay, *Venous Cutdown, in* The LIVERPOOL HOSPITAL MANUAL OF TRAUMA CARE (Scott K. D'Amours et al. eds., 6th ed. 2002). Medical professionals throughout the country are familiar with these preferred procedures, the most common of which, percutaneous central line placement, utilizes a hollow needle and a wire to secure access. Because percutaneous techniques are far less invasive, they carry none of the risks of the cut-down procedure, and are far less painful, less traumatic, and easier for the physician to master. As a result, "[p]ercutaneous alternatives should be

exhausted or prohibited prior to contemplating a peripheral cutdown." Bruce B. McIntosh, MD, and Scott A. Dulchavsky, MD, *Peripheral Vascular Cutdown*, 8 (4) CRIT. CARE CLIN. 807, 808 (1992).

3. The Record Fails To Show That A Suitable Plan Is In Place Or That Appropriate Alternatives Have Been Considered

While the record shows that Nelson requested the State's plan for addressing Nelson's condition, and asked that it consider alternatives to the cut-down procedure, the record strongly suggests that no suitable plan exists and that no such consideration was given. The Warden's affidavit explains clearly that the State's plan, which does not include percutaneous central line placement, was conceived after Nelson brought the instant litigation, and that as yet unnamed medical personnel are prepared to carry out the procedures. J.A. 90-91.

There is nothing in this record that suggests that percutaneous central line placement would fail. Given this fact, there is no medical reason to utilize the significantly more dangerous cut down procedure.[7]

[7] "A peripheral venous cutdown is not the primary consideration in most patients who require vascular access. It is specifically indicated, however, in patients who lack adequate peripheral access *and* who are *not candidates for percutaneous central venous access.*" Bruce B. McIntosh, MD, and Scott A. Dulchavsky, MD, *Peripheral Vascular Cutdown*, 8 (4) CRIT. CARE CLIN. 807, 807 (1992) (emphasis added). "*If an intravenous line cannot be established percutaneously*, and *if a subclavian (or internal jugular) catherization is not appropriate* to the clinical situation, a venous cutdown is indicated . . . ." Sam C. Eggertsen, MD, *Teaching Venous Cutdown Techniques with Models*, 16 (6) J. FAM. PRACT. 1165, 1165 (1983) (emphasis added). "Venous cut down is an emergency procedure . . . [and an] effective option for venous access in multisystem trauma and hypovolemic shock, *when peripheral cannulation becomes difficult or impossible*." *Venous Cut Down: A Quicker and Safer Technique* (visited Jan. 20, 2004), The Royal College of Surgeons, Surgical Knowledge and Skills Website <http://www.edu.rcsed.ac.uk/operations/op4.htm> (emphasis added).

4. The Record Does Not Establish That Dr. Sonnier Is Competent To Perform Cut-Down

Finally, while the Warden did not confirm that Dr. Sonnier would supervise or conduct the invasive procedures outlined in their affidavits, we note that there are significant reasons to question whether Dr. Sonnier possesses the requisite experience and training adequately and safely to perform a cut-down procedure. At no point does he describe his background and training in sufficient detail to establish that he possesses such training and experience. Our confidence in his experience is not strengthened by his claim that he has previously attached an intravenous line "to the external carotid vein located in the neck," and his assertion that the saphenous vein is in the arm. J.A. 91. Humans do not have an external carotid vein in their neck nor a saphenous vein in their arm. GRAYS ANATOMY, at 816-26; 845-50 (Carmine D. Clemente ed., 30th ed. 1984). Further, it appears that it was the Warden, and not Dr. Sonnier, who determined the procedures that would be used. The selection of a method to gain access to a non-compromised vein should be made by the doctor, and only after he or she has performed a full examination of the patient. There is no evidence that Dr. Sonnier has performed such an examination.

Conclusion

If a special medical procedure is necessary to locate a functional vein, the procedure should comply with accepted medical practice. The deficient plan proposed by the State of Alabama in this instance falls far short of those practices.

Respectfully submitted,

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